Non-Clinical Protocols

The VT EMS Office has taken care to ensure that all information in these protocols is accurate and in accordance with relevant professional guidelines as commonly practiced at the time of publication. Please report any errors in drug dosages or other language to the VT EMS Office. Use of these protocols is intended for Vermont licensed EMS organizations and their affiliated certified personnel functioning under medical direction. While these protocols may not be altered or modified, there are many options within them which require a determination by the local EMS District Medical Advisor or on-line medical direction from the receiving hospital. VT EMS personnel, instructors, and organizations are free to reproduce this document in whole or in part for educational, QA/QI, field guidance, or similar purposes. Any reproduction that represents a variation of these protocols should indicate that they are an adaptation or excerpt of the VT EMS protocols.

ABUSE/NEGLECT

I. General Considerations

A. A complete focused history and physical exam must be performed to seek additional injuries.
B. Treat any injuries that are found.
C. Abuse need not be limited to physical abuse; be alert to the possibility of psychological abuse.
D. Report any suspicion of child abuse to the Department of Social and Rehabilitation Services at your local district office. Report any suspicion of elder abuse to the Department of Aging and Disabilities at 1-800-564-1612.
E. Avoid a judgmental attitude toward the patient's caregivers.
F. Documentation should be objective and impartial.

II. History

A. Is the patient experiencing any pain or difficulty breathing?
B. Was there any loss of consciousness?
C. Obtain a history of medical problems.
D. What medications has the patient been, or is the patient supposed to be, taking (including over the counter medications)?

III. Physical Examination

A. Perform an initial assessment.
B. Assess the patient from head to toe as appropriate.
C. Obtain baseline vital signs.
D. Take note of any signs of injury.
E. Take note of any signs of neglect.

IV. Treatment

{If shock present, see hypotension protocol}
{If trauma present, see trauma protocol}

Basic

A. Airway: maintain as indicated, suction as needed.
B. Administer high concentration oxygen, as indicated by other protocols.
C. Control external bleeding.
D. Reassure the patient.

CANCELLATION/ NO TRANSPORT

I. General Considerations

A. When an EMS agency is responding, it should generally not cancel or discontinue the response prior to reaching the scene and assessing all potential patients. Non-transport encounters are some of the most concerning as they do not default to transport and subsequent hospital assessment.

B. Assessment, treatment and ambulance transport should routinely be offered to all patients irrespective of how minor the illness or injury may appear.

C. Competent, informed patients have the right to refuse treatment and transportation. This can only occur after a complete assessment has been performed. Studies have shown that a significant number of patients who refuse EMS treatment and transport will later seek medical assistance and require admission to a hospital. Some will even die.

D. Document the EMS response, assessment and actions taken in all cases.

E. After completing the Supplemental Report for Patient Non-Transport, leave a copy with the patient or, if appropriate, the patient's parent or guardian.

II. Procedure

A. Obtain an appropriate assessment of all patients based upon the nature of their illness or injury.

B. Offer all patients treatment and transport. Initiate treatment according to the appropriate protocol(s).

C. If the patient refuses offers of treatment and transport:

1. Attempt to verify the competency of the patient to refuse treatment. If the patient is less than 18 years old or potentially incompetent (e.g., under the influence of drugs or alcohol, suicidal, head injury, etc.), *seek medical direction and police assistance as needed.*

2. Explain, in the simplest possible language, the potential for harm created by the refusal. *Seek medical direction advice as needed.*

3. Attempt to have the patient demonstrate understanding of your explanation by describing the potential for harm in his or her own words.

4. If possible, have the refusal of treatment and/or transport witnessed by a third party, preferably not an EMS provider. Have the patient and witness sign a refusal form if possible.

5. Report the circumstances of the refusal of treatment and/or transportation to medical direction. Seek further advice or guidance as needed.

6. Advise the patient to seek medical attention if symptoms develop or worsen. Whenever possible, leave the patient in the care of another competent person.

7. Document the circumstances of the response and the refusal using a standard run report form and the Vermont EMS Non-transport form. Any check mark in a shaded area requires on-line medical direction prior to terminating the patient encounter.

Vermont Department of Health

Emergency Medical Services

Supplemental Report for Patient Non-Transport

108 Cherry St., PO Box 70, Burlington, VT 05402
802-863-7310 1-800-244-0911 (in VT)

Date: _____ **Time:** _____ **EMS Agency:** _____ **Incident #** _____

Incident Address: _____

_____

Patient Name: _____

Patient DOB: _____ If the patient is <18, is parent/guardian present? Yes ☐ No ☐

For qualified providers with local medical direction:

If altered mental status - Blood Glucose _____ mg/dl

If chest pain, SOB or altered mental status - Pulse Ox _____%

Cardiac monitor: Rate: _____ NSR _____ Other: ☐

Situation Involves

- **Chest pain** ☐
- **Dyspnea** ☐
- **Alt Mental status** ☐
- **Intoxication** ☐
- **Head Injury** ☐

Alert: Yes ☐ No ☐

Oriented to:

- **Person** Yes ☐ No ☐
- **Place** Yes ☐ No ☐
- **Time** Yes ☐ No ☐
- **Situation** Yes ☐ No ☐

Pulse

40 50 60 70 80 90 100 110 120 130 140 150

Obtained? Yes ☐ No ☐

Systolic BP

50 70 90 110 130 150 170 190 210 230 250 270

Obtained? Yes ☐ No ☐

Diastolic BP

30 40 50 60 70 80 90 100 110 120 130 140

Obtained? Yes ☐ No ☐

Respirations

8 10 12 14 16 18 20 22 24 26 30 32 34

Obtained? Yes ☐ No ☐

Reason for No Transport:

☐ Patient refuses transport against EMS advice

☐ Patient does not desire transport to hospital via EMS and EMS provider agrees that the patient's alternative treatment/transportation plan is acceptable.

☐ EMS provider does not feel transport by EMS is necessary/indicated and patient agrees.

☐ EMS provider does not feel transport by EMS is necessary/indicated and patient desires transport.

Patient understands clinical situation Yes ☐ No ☐

Patient verbalizes logical reasons for desiring no transport Yes ☐ No ☐

Risks explained to patient: _____

Patient verbalized understanding of risks Yes ☐ No ☐

Responsible adult family member or friend at the scene Yes ☐ No ☐

Patient's plan for seeking further medical evaluation: _____

_____

I understand that evaluation and/or treatment by Vermont certified Emergency Medical Services (EMS) personnel is not a substitute for care by my personal physician or hospital emergency department. Although I am not being transported to a hospital by EMS, my condition may still warrant care by a physician. I am responsible for seeking the care I feel is necessary,and I have a plan for doing so. I also release the EMS personnel and organizations involved with my current situation from all claims resulting from my voluntary refusal of treatment and/or transport.

_____ _____ _____

Patient or Parent/Guardian signature Relationship (if applicable) Witness

_____ Medical Direction ID or name: _____

EMS Provider & Cert Number Consulted by: None _____ Radio _____ Phone_____ On scene _____

Check marks in shaded areas require consult with on-line medical direction.

White - Squad ; Pink - Patient; Yellow - File with District Medical Advisor Revised 5/8/2006

COMMUNICATIONS

I. General Considerations

A. Effective communications is one of the most essential components to successful emergency operations.

B. EMS relies heavily on radio communications. Radio discipline and knowledge of the equipment being used contributes to the smooth flow of information.

C. Avoid the use of "10 Codes". Often these codes have different meanings from one area to another. Clearly spoken English at a moderate pace and without jargon is usually best understood.

D. All communications systems have limitations including issues of coverage, reliability, channel loading, etc. Whenever possible, redundant communications capability is preferred and should be supported for both dispatch and medical direction communications.

E. Many EMS providers are using commercial wireless communications such as cell phones or commercial paging. In large-scale events, these systems are prone to the same demands as EMS radio frequencies in terms of system loading. Always be prepared to rely upon EMS radio linkages.

F. The 155.340 frequency is used by all hospitals in Vermont as the primary frequency for medical direction and pre-hospital to hospital communications.

G. Depending upon location in the state, 155.280 and 155.205 are used for dispatch, EMS operations, or a secondary hospital communications frequency. These two frequencies are available to licensed EMS organizations to support scene operations not involving hospital communications. Avoid using 155.280 or 155.205 in an area where the use of these frequencies may interfere with local dispatch.

H. Vermont hospitals rely on notification from EMS for protection of their assets in cases where patients may self-transport and are contaminated, violent or represent other hazards to routine hospital operations. Provide the earliest possible notification to <u>all</u> area hospitals when hazards from patients are a possibility.

I. Most communications from EMS first responders should be relayed through the transporting ambulance to the hospital. EMS first response to ambulance communications generally occurs on a frequency other than 155.340.

J. Avoid all non-incident (personal, convenience, etc.) related communications on 155.340, 155.280, and 155.205.

II. Procedures

A. The following is a typical sequence of expected ambulance to hospital communications for most single patient emergency calls:

- Primary hospital(s) notification at the beginning of the response to include the nature and general location of the response.
- Primary hospital(s) notification upon arrival at the scene.
- A brief scene update as necessary depending upon the patient's condition and/or nature of the call. This update often includes the chief complaint, age/sex of the patient, and any other relevant information useful to the hospital in preparing for the arrival of the patient. For less acute situations or extended transports, this update is often not necessary.
- A patient report either from the scene or while transporting should include (not necessarily in this specific order):
  - Age (date of birth) and sex of the patient
  - Chief complaint (and priority designation if used locally)
  - History of the present illness
  - Vital signs
  - Physical exam findings
  - Past medical history
  - Relevant medications and allergies

  - Treatments performed
  - On-line medical direction orders requested
  - Estimated time of arrival
- Hospital notification upon arrival

B. Avoid communications that could identify the patient. This includes but is not limited to:
- Communicating a patient's name by radio.
- Communicating a specific street address on initial notification to the hospital.
- References to the patient that serve as secondary identifiers (e.g. "The patient is the principal at the local elementary school")
- Providing the patient's initials or other identifiers by radio unless specifically requested by the hospital

C. Whenever possible use a landline telephone to communicate patient information from a scene to the hospital. This allows for complete identification of the patient prior to arrival and reduces channel loading on the 155.340 frequency.

D. In cases where it is inconvenient or impossible to use a landline telephone, use a cell phone where feasible.

E. Whenever communicating by radio, keep the messages as brief and concise as possible. Allow a 5 second break in communications approximately every 15 seconds during a transmission to the hospital in the event another EMS unit has high priority communications.

F. If on-line medical direction orders are received in the field, either by radio or telephone, repeat the order to the hospital to verify accurate understanding of the orders given.

G. At the scene of a mass casualty incident, shift operations communications from 155.340 to 155.280, 155.205, and/or a local dispatch frequency(s). All communications from the scene to the hospital should originate from the EMS control officer or the EMS loading officer. Once enroute, ambulance communications to the hospital should be limited to relevant changes in patient status, on-line medical direction, and the estimated time of arrival.

DEAD ON THE SCENE

I. General Considerations

A. Physical findings such as cyanosis, cool skin, or fixed and dilated pupils are not reliable signs of unsurvivability.

B. For patients in a health care facility or program with a written physician's Do Not Resuscitate order, do not initiate the Resuscitation protocol.

C. If there is any question about whether a resuscitation should be initiated, contact on-line medical direction.

D. EMS personnel should attempt a resuscitation on a patient unless there is clear evidence of unsurvivability.

E. Death is a part of life and resuscitation is not appropriate in all circumstances. It is the prerogative of medical direction to order that a resuscitation attempt not be initiated or to terminate one that has been initiated.

F. If enroute when an order to cease resuscitation efforts is received, continue transport of the body to the receiving facility. The use of lights and sirens is no longer therapeutically necessary.

II. History

A. How many patients are on the scene? Consider available resources on scene and expected to become available shortly. In a multiple patient situation, treatment resources should be devoted first to the most critical patients who are not in cardiac arrest.

B. Can it be determined reliably how long the patient has been without pulse and respirations? Unless there is strong evidence of an earlier arrest time, it should be assumed that the patient arrested just prior to arrival of EMS personnel.

III. Physical Exam

A. Assess the scene and determine the mechanism of injury if any.

B. Perform an initial assessment.

C. Perform a brief focused history and physical exam to determine if there are unsurvivable injuries, rigor mortis or discoloration of skin at the lowest parts of the body.

IV. Treatment

A. In cases where the EMS personnel believe the patient to be nonsalvageable but one of the below indications is not present,contact on-line medical direction for guidance.

B. If the patient is found without pulse and respirations, a resuscitation should be initiated unless:

1. *On-line medical direction orders otherwise*.
2. The patient is decapitated.
3. The patient's body is incinerated.
4. The patient has rigor mortis (stiffening) in multiple joints and/or there is lividity (discoloration) found at the lowest points of the body. In this case there should also be a history that supports an extended time since the patient was last known to be alive.
5. The patient's body has clear evidence of decomposition.

C. Where a decision has been made not to resuscitate, do not use the cardiac monitor to "confirm" death unless otherwise ordered by medical direction.

D. In cases where the scene is a possible crime scene and law enforcement officers at the scene believe that the patient is unsurvivable, EMS providers should work in concert with law enforcement officers to both assess the patient and preserve the crime scene.

E. If the patient is not to be resuscitated, the circumstances of that decision should be reported to medical direction and documented on a run report. EMS should notify the law enforcement agency of jurisdiction.

F. In general, ambulances should not be used to transport dead persons. Vehicles, personnel and equipment should be returned to service as soon as possible.

DESTINATION DETERMINATION

I. General Considerations

A. The appropriate destination for a patient with a potentially serious illness or injury is the nearest hospital capable of managing the patient's illness or injury.

B. The State of Vermont does not designate a hospital by specialty or care capability. A hospital's capability fluctuates based on factors such as operative capabilities, blood bank status, intensive care availability, personnel, etc. Medical direction may consider these factors in providing on-line medical direction to determine destination of any individual patient.

C. With few exceptions in Vermont, it is not necessary or appropriate to pass one hospital to transport a patient to another hospital.

D. Patients with life threatening conditions or symptoms (e.g., airway obstruction, cardiac arrest, anaphylaxis, etc.) should be transported directly to the nearest hospital.

E. Patient condition, personal physician, patient preference, transport time/distance, previous hospitalizations, road conditions and similar variables are all relevant factors for consideration in determining where to transport a patient.

F. When the difference in estimated transport times to more than one hospital is less than ten minutes, the hospitals may be presumed to be of equal transport distance.

G. Patients with suspected major trauma should generally be taken to the closest hospital that is equipped and staffed to manage the patient's problems. When two or more hospitals are approximately the same travel time away (within 10 minutes of each other), the ambulance should transport the patient to the hospital with the higher trauma care capability. Major trauma includes conditions described in the major multiple system trauma protocol and:

1. Respiratory compromise
2. Altered mental status
3. Hypotension (systolic BP <90 mm Hg)
4. Penetrating injury to the head, neck, chest or abdomen
5. Amputation proximal to the ankle or wrist

H. In the absence of a specific inter-hospital written guidance or agreement, seek on-line medical direction from the nearest hospital when in doubt about where to transport.

II. Procedure

A. Obtain an appropriate history and perform a physical examination based on the patient's presenting problem.

B. Determine the patient's preference, if any, for a transport destination.

C. Initiate treatment according to the appropriate protocol(s).

D. If the patient is requesting transport to a hospital other than the nearest one, or if in the judgment of the EMS personnel, the patient is a candidate for transport to a more distant hospital, *contact medical direction at nearest hospital for consultation and direction regarding the choice of a destination hospital*.

I. General Considerations

A. Domestic violence is purposeful, coercive behavior to get compliance and/or control. It is not a single incident, but part of a pattern of assaultive behaviors which adults or adolescents use against their intimate partners. It includes physical, sexual, psychological abuse and economic control.

B. Domestic abuse crosses all demographics and occurs in all types of intimate partner relationships.

C. Domestic disputes are among the most dangerous scenarios emergency personnel encounter.

D. EMS responders are routinely dispatched unknowingly to homes where the injuries or illnesses are the result of violence between intimate partners.

E. Personal safety is the primary concern when responding to a domestic assault.

F. Photographs are best deferred to professionals who can take them and preserve them as evidence.

II. Procedure

A. If the call is dispatched as a domestic assault or dispute, are the police on the scene?
   1. If no, stage and wait unti scene is secured.
   2. If yes, stage and notify police of your arrival; enter only as directed by police.
   3. Remain vigilant while providing care. The victim may become hostile toward police and/or EMS personnel out of concern for the batterer.

B. Since few injuries resulting from domestic violence are publicly identified as such, any call should be considered potentially dangerous. Be particularly careful if:
   1. Dispatch is having difficulty getting information from the caller, the caller hangs up, or there is a history of calls to this same address.
   2. You are met at the door or denied entry by someone who claims there was no call made, or who says the victim is fine and doesn't need medical attention. Contact the police and Medical Control.

C. On every call, assess the scene carefully upon arrival before entering. Look for:
   1. Evidence of a fight (property damage), yelling, evidence of weapons.
   2. Evidence of children or pets present.
   3. Which lights are on at night.

D. Upon entry, observe for:
   1. Signs of struggle/conflict or attempts at concealment of evidence.
   2. Signs of drug/alcohol use
   3. Aggressive behavior or heightened emotions
   4. Obvious weapons.

E. Decide whether to withdraw to a staging area and call for police, or proceed with caution. Don't hesitate to return to your vehicle to make decisions, notify police and/or Medical Control. Consider using cell phone instead of radio if possible.

F. If decision is to proceed:
   1. Clearly and simply identify yourself and your role. Use non-threatening body language and approach.
   2. Remember, a uniform is a uniform. EMS personnel often wear blue, badge, radio and holsters, all of which can easily confuse an already agitated person.
   3. Use a team approach. Designate one provider to observe for safety, one or more to work on the patient, another to calmly distract a potential aggressor or discreetly assess children for injuries.
   4. Be aware of surroundings—the number and location of exits, number and location of people in the residence, potential weapons and hiding places. Position rescuers with access to exit.
   5. Let occupants lead down hallways or into stairwells or rooms. Keep them in front.

6. Avoid treating patients in a bedroom (only one exit, intimate setting, often weapons hidden) or a kitchen (many possible weapons). Use hard chairs rather than upholstered furniture, as weapons are easily hidden among cushions.
7. Limit number of people present, whether it be responders, neighbors, etc. Have pets secured before entering, if possible.
8. Attempt to separate the patient from the suspected batterer for assessment and treatment. If possible, move the patient to the ambulance to assess and treat, even if non-transport appears likely.

III. Treatment

A. Injury as a chief complaint:
   1. Look for injuries resulting from a defensive or deflecting move (forearm, shoulder) in the shape of objects (belt buckles, handprint), on areas normally covered by clothing, in different stages of healing or on bystanders such as children or pets who may have gotten caught in the 'crossfire'.

B. Any injury to a pregnant woman is suspect as 1 in 12 pregnant women are battered:
   1. Look for miscarriage, pre-term labor, multiple injury sites, bruising on the abdomen or breasts, vaginal bleeding. Also look for signs of sexual assault during pregnancy or the postpartum period.
   2. Document discrepancies: stated mechanism of injury vs. actual presentation, conflicting accounts of how injury occurred, delay in seeking medical care.

C. Illness as the chief complaint.

D. Screen patients for domestic violence. Ask the questions:
   1. 'Should I be concerned for your safety?' Ask in private, away from all others including suspected abuser.
   2. Present screening of domestic violence as routine. Ask directly and indirectly. Be calm, matter-of-fact and nonjudgmental. Use open-ended questions.
   3. If your patient answers 'yes' to questions about domestic violence in the relationship:
      a. Document carefully what has been done and said.
      b. Use the victim's own words, not broad terms like 'abused' or 'battered.'
   4. Assess the possibility for both immediate danger and escalating danger:
      a. Has violence increased in frequency, severity?
      b. Are there firearms or other weapons present or easily available?
      c. If in immediate danger, offer access to crisis services/shelter.
   5. Offer written information about resources. It may be safer to write down just the phone number of local crisis agencies without the names.
   6. If your patient answers 'no' or will not discuss the topic, document any inconsistencies. Make referrals discreetly.
   7. The objective is to make the assessment and offer the resource information.

E. Transport vs. Non-Transport
   1. Attempt to get patient into ambulance, if only for assessment and the opportunity to talk privately.
   2. If patient accepts transport:
      a. Advise hospital of security issues prior to arrival.
      b. Offer to request an advocate from a local domestic violence service agency to meet the patient at the hospital for support.
      c. Use transport time to provide support, listen.

3. If patient refuses transport:
    a. Explain symptoms to watch for that might indicate injury/illness is escalating.
    b. Discuss consequences of not seeking medical care.
    c. Be nonjudgmental.

F. Documentation
1. In the course of documenting medical care, EMS providers are creating evidence that may be used later to prosecute an abusive partner. Since EMS responds to many domestic violence-related calls to which the police are not dispatched, EMS documentation may be the only evidence to support future charges. Documentation should include:
    a. Inconsistencies between injury presentation and explanations given.
    b. Delays in seeking medical care.
    c. Shapes of bruises.
    d. Evidence of previous injuries.
    e. Environmental observations.
    f. Statements made by parties in their own words.
    g. Use of a body map to illustrate locations of multiple injuries.
2. Make it clear to the patient that preserving physical evidence does not obligate the patient to report the abuse, but leaves that option open.

G. Take appropriate body substance isolation precautions.

IV. Resources and Referrals*

A. State of Vermont Domestic Violence Hotline 800-489-7273
B. National Domestic Violence Hotline 800-799-SAFE (or 800-799-7233).
C. Women Helping Battered Women 802-658-1996.
D. See also: Abuse/Neglect Protocol.

* These phone numbers change frequently and should be updated locally. Local medical direction may be a resource.

DO NOT RESUSCITATE (DNR)

I. General Considerations

A. This protocol is intended to cover patients in the health care system who have valid do-not-resuscitate (DNR) physician orders. This can include patients in health care facilities or under care in an out-of-facility setting (e.g., hospice care at home).

B. In cases where the patient is competent, EMS personnel should attempt to verify the patient's desire for no resuscitation attempts.

C. Emergency medical services must be provided to all persons regardless of resuscitation status, so that terminally ill patients have access to emergency palliative care and patients who decline CPR have access to other life-sustaining treatments.

D. DNR simply means do not initiate CPR (ventilations or compressions), defibrillation, advanced airway techniques (e.g., ET or Combitube), resuscitation drugs or other resuscitation measures. It does not affect other EMS care. Comfort care measures may include positioning, temperature/environmental control, oral or nasal airways, suctioning, splinting, oxygen, IVs by on-line medical direction, assisted medications, etc.

II. Procedure

A. Care other than resuscitation measures should be initiated for patients with known DNR orders.

B. EMS personnel should verify the physician's written order. Where possible, the name of the physician and the date the order was created should be obtained and noted on the EMS run report. Hospice or the Home Health Agency involved may be able to provide assistance.

C. If possible, EMS personnel should attempt to verify with the patient, patient's legal guardian or the patient's durable medical power of attorney that the DNR order is still in effect (i.e., has not been revoked).

D. Seek on-line medical direction for circumstances not specifically covered by this protocol.

I. General Considerations

A. All EMS personnel should have at least awareness level training.
B. Avoid the urge to rush in. Hazardous materials are insidious; their hazards may not be readily apparent. Your number one priority is your safety.
C. Never exceed your training or realistic capabilities on a hazardous materials response.
D. Transport patients only after they have been decontaminated according to a process determined by Incident Command.
E. Hazardous materials incidents may require the EMS provider to perform many different functions at the scene. These duties need to be considered and agreed to in advance through development of a community response plan.

II. Procedures

EMS First On Scene

A. Until proven otherwise, all incidents are hazardous materials incidents.
B. Approach the scene safely and cautiously.
    1. Approach from upwind and uphill (if possible).
    2. Observe from a distance.
C. Identify if hazards are present.
D. Secure the scene; deny entry to bystanders and untrained personnel.
E. Establish incident command and identify a command post.
F. Request additional assistance as needed.
G. Update hospital(s) of any potential of contaminated patients arriving by non-EMS means.
H. Do not enter any areas or zones unless you are properly trained and equipped to do so.
I. Transfer incident command to the senior fire official for the jurisdiction when they arrive.

EMS Not First on Scene

A. Report to the command post or staging area as directed.
B. Obtain additional assistance (if required).

I. General Considerations

A. Responsibility

Although employers bear some of the responsibility for prevention of spread of disease, each EMS provider must take the responsibility to safeguard his or her own health and safety. This includes using the personal protective equipment (PPE) appropriate for a particular situation. Although this protocol describes many of the elements of an exposure control plan, it is not an exposure control plan.

B. Risks of Disease Transmission

The risk for transmission of most serious infectious diseases is low, e.g., the human immunodeficiency virus (HIV), which causes AIDS. If an EMS provider is stuck by a needle containing HIV-positive blood, the chance of becoming HIV-positive is approximately 0.3% (less than 1 in 300). This risk can be reduced even further by taking a few precautions. Hepatitis B, on the other hand, is much easier to contract; there is a 15% - 30% chance of an unvaccinated person becoming infected after being stuck by a needle containing blood with hepatitis B virus (HBV).

Disease can be passed by fluids other than blood. Other potentially infectious materials are semen, vaginal secretions, cerebrospinal fluid, synovial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, any body fluid that is visibly contaminated with blood and all body fluids in situations where it is difficult or impossible to differentiate between body fluids. It is frequently not possible for EMS providers to know whether a patient has an infectious disease.

C. Preventing the Spread of Disease

1. The easiest and most effective way to prevent spread of disease is handwashing. The preferred agent to use for cleaning unsoiled hands is an alcohol-based hand rub. Clean soiled hands with soap and water. Either plain (non-antimicrobial) or antimicrobial soap is acceptable. Hands are soiled if they are visibly dirty, contaminated with proteinaceous material, or soiled with blood or other body fluids. They are also considered soiled after the healthcare worker has used a restroom or if the healthcare worker has had either suspected or proven exposure to *Bacillus anthracis*, the bacterium that causes anthrax.
2. Another way to prevent spread of disease is to use standard precautions, which combine the major features of universal (or blood and body fluid) precautions and body substance isolation (BSI) and applies them to all patients. Standard precautions apply to 1) blood; 2) all body fluids, secretions, and excretions except sweat, regardless of whether or not they contain visible blood; 3) nonintact skin; and 4) mucous membranes.
3. EMS providers should not recap, bend or break needles or other sharps. Recapping is permitted only when no alternative is feasible or it is required for a specific medical procedure. When it is done, the provider should use a mechanical device or one-handed technique.
4. EMS providers should dispose of contaminated needles and sharps as soon as possible in appropriate sharps containers.
5. The spread of airborne diseases can also be limited by a few simple precautions. Patients who are at risk for infection with an airborne disease include those who have a persistent cough (more than three weeks), bloody sputum, night sweats, weight loss, anorexia or fever. If the patient is not in acute respiratory distress and has no other indications for oxygen, have the patient wear a surgical mask if he will tolerate it. The EMS provider should be qualified for and wear an N-95 mask or other respirator rated at N-95 or higher. Additionally, EMS providers should avoid aerosol-generating procedures or anything that might provoke coughing by the patient. As circumstances allow, keep windows open and set heating and air conditioning systems on a nonrecirculating cycle. If the ambulance is equipped with HEPA (high efficiency particulate air) filtration, this should be used.

As circumstances allow, limit the number of providers in close contact with the patient.

Whenever possible, use a pocket mask, bag valve mask or other device to ventilate a patient rather than perform mouth-to-mouth. This is true for all patients.

D. Exposure Control Plan

Each EMS agency should have an exposure control plan that is reviewed and updated at least annually. It should include:

- a general explanation of the modes of transmission, epidemiology and symptoms of bloodborne and airborne diseases;
- a description of engineering controls and work practice controls (equipment and procedures) that instructs providers in the means to prevent exposure;
- information on the hepatitis B vaccine and how to obtain it free of charge;
- the procedure for vaccination against hepatitis B;
- a description of types, selection, proper use, location, removal, handling, decontamination and disposal of PPE;
- the procedure to follow when a potential exposure occurs, including the actions to take and the person to contact;
- how a provider should get evaluation and follow-up after an exposure;
- a description of how hazards are communicated;
- record keeping standards; and
- documentation of the agency's compliance with the requirement for annual consideration of new technology that reduces exposure to bloodborne pathogens (as required by the revisions made in 29 CFR 1910.1030 after passage of the Needlestick Safety and Prevention Act of 2000).

Each agency should also have a respiratory protection program that is reviewed and updated at least annually. This may be included as part of the exposure control plan. Elements of such a program include:

- procedures for selecting respirators for use in the workplace;
- medical evaluations of employees required to use respirators; a physician or other licensed health care professional shall perform medical evaluations using a medical questionnaire or an initial medical examination that obtains the same information as the medical questionnaire; the employer shall provide a follow-up medical examination to any employee who gives a positive response to certain questions on the questionnaire;
- fit testing procedures for tight-fitting respirators; fit testing must be repeated annually and whenever there is a change in the respirator facepiece provided by the employer and whenever there is a change in the employee's physical condition that could affect respirator fit;
- procedures for proper use of respirators in routine and reasonably foreseeable emergency situations;
- procedures and schedules for cleaning, disinfecting, storing, inspecting, repairing, discarding and otherwise maintaining respirators;
- training of employees in the respiratory hazards to which they are potentially exposed during routine and emergency situations;
- training of employees in the proper use of respirators, including putting on and removing them, any limitations on their use, and their maintenance; and
- procedures for regularly evaluating the effectiveness of the program.

E. Immunization

Each EMS agency should provide hepatitis B vaccinations free of charge to EMS providers who may in the course of their EMS duties have occupational exposure, i.e., they may reasonably be expected to come into contact with blood or other body fluids. Agencies should also assure that providers are immune to or up to date in their vaccinations against

measles, mumps, rubella, tetanus and pertussis.

F. Personal Protective Equipment (PPE)
PPE consists of gloves, eye protection, masks and respirators, gowns, pocket masks and other ventilation devices that the EMS agency furnishes to providers at no charge. They should be used as appropriate to prevent contact with blood and other body fluids. See Appendix 1, "Examples of Recommended Personal Protection for Worker Protection Against HIV and HBV Transmission in Prehospital Settings." The provider may briefly and temporarily decline to use PPE when, under rare and extraordinary circumstances, the provider decides that the use of PPE would prevent the delivery of health care or would pose an increased hazard to the safety of the responder.

G. Housekeeping
All equipment and environmental working surfaces should be cleaned and decontaminated after contact with blood or other potentially infectious materials. See Appendix 2, "Reprocessing Methods for Equipment used in the Prehospital Health-Care Setting" and Appendix 3, "Recommendations for Decontamination and Cleaning of Rescue Vehicles."

H. Hazard Communication
Containers with blood or other potentially infectious materials should have the fluorescent orange or orange-red biohazard label on them. There are two major exceptions to this. First, red bags or containers may be substituted for the labels. Second, containers of blood for clinical use (e.g., blood drawing tubes) do not have to be labeled.

I. Training
An EMS agency should provide information and training on bloodborne and airborne diseases before an EMS provider begins providing patient care. The agency should provide annual refresher training to providers. The refresher training should include, among other things, a description of any changes in tasks or procedures that affect the provider's occupational exposure.
Initial training should include:

- a description of OSHA's requirements;
- a description of the EMS agency's exposure control plan;
- a general explanation of the modes of transmission, epidemiology and symptoms of bloodborne and airborne diseases;
- a description of engineering controls and work practice controls (equipment and procedures) that assist providers in avoiding exposure;
- information on the hepatitis B vaccine;
- the procedure for vaccination against hepatitis B;
- a description of types, selection, proper use, location, removal, handling, decontamination and disposal of PPE;
- the procedure to follow when a potential exposure occurs, including the actions to take and the person to contact;
- how a provider should get evaluation and follow-up after an exposure;
- a description of how hazards are communicated; and
- an opportunity to get answers to providers' questions.

J. Record Keeping
Each EMS agency should establish and maintain an accurate, confidential medical record for each EMS provider with occupational exposure, i.e., the provider may reasonably be expected to come into contact with blood or other body fluids. The record should include:

- the provider's name;

- a copy of the provider's hepatitis B vaccination status;
- a copy of all results of examinations, medical tests and follow-up procedures for the provider;
- the agency's copy of the healthcare professional's written opinions on the desirability of hepatitis B vaccination and post-exposure evaluation and follow-up;
- for an exposure, the information provided to the healthcare professional who evaluated the provider (description of the provider's duties as they relate to the exposure incident, documentation of the route(s) of exposure and circumstances under which the exposure occurred and results of the source individual's blood testing, if available).

Each EMS agency should have training records. The records should be maintained for at least three years from the date the training occurred. The training records should include:

- dates of training sessions;
- contents or a summary of the training sessions;
- names and qualifications of the person(s) conducting the training;
- names and job titles of the person(s) conducting the training.

K. Occupational Safety and Health Administration (OSHA)

OSHA has rules pertaining to bloodborne pathogens (29 CFR 1910.1030) and tuberculosis (29 CFR 1910.134, the Respiratory Protection Standard, and OSHA Instruction CPL 2.106, Enforcement Procedures and Scheduling for Occupational Exposure to Tuberculosis (TB)).

L. Ryan White Comprehensive AIDS Resources Emergency Act

The Ryan White CARE Act is a federal law that gives emergency response employees certain rights and obligations when they are exposed to certain potentially life-threatening diseases during the course of an emergency. The potentially life threatening diseases include certain airborne diseases (infectious pulmonary tuberculosis), bloodborne diseases (hepatitis B and human immunodeficiency virus infection, including AIDS) and uncommon or rare diseases (diphtheria, meningococcal disease, plague, hemorrhagic fevers and rabies). The law requires that each emergency response agency have a designated officer (DO) for infection control who coordinates information gathering and communication. The Ryan White law specifically includes not just employees, but also "other persons (including employees of legally organized and recognized volunteer organizations, without regard to whether such employees receive nominal compensation) who, in the course of professional duties, respond to emergencies in the geographic area involved."

M. Emerging Infectious Diseases

The 2002-2003 outbreak of Severe Acute Respiratory Syndrome (SARS) demonstrated very effectively that new infectious diseases can and will occur. It is not possible to predict the location, form or virulence of such a disease, so EMS providers and agencies will need to be vigilant. Providers can rely on the Vermont Department of Health and the Centers for Disease Control and Prevention to be reliable and timely sources of information and advice when these outbreaks occur.

II. Procedures

A. Exposure to Bloodborne Disease

1. An exposure has occurred when there is eye, mouth, other mucous membrane, non-intact skin or parenteral contact between an EMS provider and blood or other potentially infectious material as a result of the EMS provider's duties. Non-intact skin includes weeping wounds, rashes and open wounds less than one hour old.
2. As soon as possible after an exposure, the EMS provider should wash with soap and water any skin that was involved. Flush exposed mucous membranes with water.
3. The EMS provider should contact the agency's designated officer (DO) for infection control and document the route of exposure and the circumstances under which the incident occurred.

4. The designated officer should collect the facts relating to the circumstances of the incident and determine whether the responder could have been exposed to hepatitis B or HIV (assuming the source patient had either or both of those diseases).
5. If the DO determines that the responder could have been exposed to a bloodborne disease, then the DO should submit to the hospital to which the patient was transported a written request for a determination of exposure.
6. The hospital should evaluate the facts and, if the source patient can be identified, review the patient's medical records for results of tests for hepatitis B, HIV infection, and infectious pulmonary tuberculosis (TB) and for signs and symptoms compatible with these diseases.
7. Federal law requires the hospital, within 48 hours, to submit one of three written responses:
   a. there was no exposure;
   b. there is insufficient information to determine whether there was an exposure; or
   c. there was an exposure.
8. If the hospital notifies the DO that there was an exposure, the notification shall include the name of the infectious disease involved and the date the source patient was transported.
9. The DO shall notify providers who responded to the incident and who may have been exposed:
   a. That they may have been exposed;
   b. Of the name of the disease involved;
   c. Of any actions the provider should take;
   d. If medically appropriate, of the date of the incident.
10. The EMS agency should cooperate with the receiving hospital in seeing that HBV and HIV testing is performed on the source patient when the patient's HBV and HIV status is unknown and the patient has given consent. The agency and hospital should make the source individual's test results available to the provider in accordance with federal and state laws and regulations.
11. The EMS agency should arrange for the responder's blood to be tested for HBV and HIV as soon as feasible after consent is obtained.
12. The agency should provide post-exposure prophylaxis when medically indicated. Free consultation with experienced experts is available from the National Clinicians' Post-Exposure Prophylaxis Hotline (PEP Line). This is a 24-hour emergency hotline that provides immediate information to clinicians regarding the management of an employee who has experienced an occupational exposure to blood. The toll-free number is (888) 448-4911.
13. The EMS agency should also provide counseling to the provider as needed. This is especially important with regard to HIV exposure.
14. If the provider reports an illness that may have resulted from the exposure, the EMS agency should arrange for medical evaluation.

B. Exposure to Airborne Disease

1. An exposure may occur when a provider shares air space with a patient who has an infectious disease caused by an airborne pathogen. Vermont has one of the lowest TB case loads in the country. There were seven cases of infectious pulmonary TB in the entire state in 2001, 4 cases in 2000 and 3 in 1999. Similarly, suspected cases of Severe Acute Respiratory Syndrome (SARS) have been uncommon, but not unheard of, in Vermont. This knowledge must be balanced with an awareness that people diagnosed in another state may visit Vermont.
2. If a hospital determines that a patient transported by ambulance has infectious pulmonary TB, federal law requires the hospital to notify the DO for the service within 48 hours of making the diagnosis.

3. An EMS provider may request a determination by the agency's DO if the provider believes he or she may have been exposed to infectious pulmonary tuberculosis. The procedure is the same as for bloodborne diseases.

C. Exposure to Uncommon or Rare Diseases

1. An EMS provider may request a determination by the agency's DO if there is reason to believe he or she may have been exposed to an uncommon disease like meningococcal disease. The procedure is the same as for bloodborne diseases.

III. Appendices

Appendix 1 Examples of Recommended Personal Protection for Worker Protection Against HIV and HBV Transmission in Prehospital Settings

Appendix 2 Reprocessing Methods for Equipment used in the Prehospital Health-Care Setting

Appendix 3 Recommendations for Decontamination and Cleaning of Rescue Vehicles

APPENDIX 1: Examples of Recommended Personal Protection for Worker Protection Against HIV and HBV Transmission in Prehospital Settings

Task or Activity	Disposable Gloves	Gown	Mask	Protective Eyewear
Bleeding control with spurting blood	Yes	Yes	Yes	Yes
Bleeding control with minimal bleeding	Yes	No	No	No
Emergency childbirth	Yes	Yes	Yes, if splashing is likely	Yes, if splashing is likely
Blood drawing	At certain[1] times	No	No	No
Starting an intravenous (IV) line	Yes	No	No	No
Endotracheal intubation, esophageal obturator use	Yes	No	No, unless splashing is likely	No, unless splashing is likely
Oral/nasal suctioning, manually clearing airway	Yes[2]	No	No, unless splashing is likely	No, unless splashing is likely
Handling and cleaning instruments with microbial contamination	Yes	No, unless soiling is likely	No	No
Measuring blood pressure	No	No	No	No
Measuring temperature	No	No	No	No
Giving an injection	No	No	No	No

NOTE: The examples provided in this table are based on application of universal precautions. Universal precautions are intended to supplement rather than replace recommendations for routine infection control, such as handwashing and using gloves to prevent gross microbial contamination of hands (e.g., contact with urine or feces).

[1] Gloves should be worn for phlebotomy if cuts, scratches or other breaks in the skin are present on the worker's hands, if the worker is inexperienced, or if the situation suggests a greater possibility of bleeding.

[2] While not clearly necessary to prevent HIV or HBV transmission unless blood is present, gloves are recommended to prevent transmission of other agents (e.g., Herpes simplex).

Centers for Disease Control, February 1989

APPENDIX 2: Reprocessing Methods for Equipment Used in the Prehospital Healthcare Setting

Sterilization

Destroys: All forms of microbial life, including high numbers of bacterial spores.

Methods: Steam under pressure (autoclave), gas (ethylene oxide), dry heat, or immersion in EPA-approved chemical "sterilant" for prolonged period of time, e.g., 6-10 hours or according to manufacturers' instructions. Note: liquid chemical "sterilants" should be used only on those instruments that are impossible to sterilize or disinfect with heat.

Use: For those instruments or devices that penetrate skin or contact normally sterile areas of the body, e.g., scalpels, needles, etc. Disposable invasive equipment eliminates the need to reprocess these types of items. When indicated, however, arrangements should be made with a health-care facility for reprocessing of reusable invasive instruments.

High-Level Disinfection

Destroys: *Mycobacterium tuberculosis,* vegetative bacteria, most viruses, and most fungi, but does not kill bacterial spores.

Methods: EPA-registered "hospital disinfectant" chemical germicides that have a label claim for tuberculocidal activity; commercially available hard-surface germicides or solutions containing at least 500 ppm free available chlorine (a 1:100 dilution of common household bleach – approximately ¼ cup bleach per gallon of tap water).

Use: For those surfaces that come into contact only with intact skin, e.g., stethoscopes, blood pressure cuffs, splints, etc., and have been visibly contaminated with blood or bloody body fluids. Surfaces must be precleaned of visible material before the germicidal chemical is applied for disinfection.

Low-Level Disinfection

Destroys: Most bacteria, some viruses, some fungi, but not *Mycobacterium tuberculosis* or bacterial spores.

Methods: EPA-registered "hospital disinfectants" (no label claim for tuberculocidal activity).

Use: These agents are excellent cleaners and can be used for routine housekeeping or removal of soiling in the absence of visible blood contamination.

Environmental Disinfection: Environmental surfaces which have become soiled should be cleaned and disinfected using any cleaner or disinfectant agent which is intended for environmental use. Such surfaces include floors, woodwork, ambulance seats, countertops, etc.

IMPORTANT: To assure the effectiveness of any sterilization of disinfection process, equipment and instruments must first be thoroughly cleaned of all visible soil.

Centers for Disease Control, February 1989

APPENDIX 3: Recommendations for Decontamination and Cleaning of Rescue Vehicles

Clean-Up Kit

Household utility gloves
Plastic spray bottle with cleaning agent
Plastic spray bottle with disinfectant solution or bottle with concentrated household bleach to be diluted with water (1:100 dilution approximates ¼ cup bleach per gallon of water)*
Disposable toweling
Plastic bags (hospital red bags, household plastic bags)
Basket/carrier to hold cleaning supplies

Clean-Up Procedure After Each Call

1. Prepare vehicle for cleaning/decontamination.
   a. Always wear utility gloves throughout clean-up procedure.
   b. Remove used or soiled linen and place in designated bag for laundering. Either leave laundry at the hospital or reprocess in the EMS laundry using warm water, detergent, and bleach as recommended on the product labels.
   c. Discard any soiled dressings, bloody materials, and other contaminated, non-sharps waste in a red bag and leave at the hospital.
   d. Place reusable equipment which needs reprocessing in plastic bag (any color other than red).
   e. Check the vehicle for any needles or other sharps which may have been left and carefully dispose in a sharps container.

2. Check for areas soiled with blood and other visible body substances and remove.
   a. Remove moist blood and other body substances with paper toweling and discard in a red bag.
   b. Spray cleaner on affected area and remove any remaining blood or body substances. Dispose of towels in red bag.
   c. Spray disinfectant* on affected area, wipe over the surface, and allow to air dry. Dispose of towels in red bag.

3. Spray cleaner on remaining surfaces with which the patient had contact as well as surfaces which were used in the course of providing prehospital care. Wipe the surface with toweling and allow to air dry.

Periodic Cleaning of Rescue Vehicles

On a regular basis (e.g., weekly, monthly) as determined by the frequency of vehicle use and obvious need, the floors, walls, interior and exterior of cabinets and drawers, benches, and other surfaces, should be thoroughly cleaned. The same cleaning agent used between cases can be used for this more extensive cleaning. A supply kit should be kept in a central location for this purpose (e.g., pail, reusable cleaning cloths that are laundered after use, supply of cleaning agents). Wipe with toweling and allow to air dry.

Since carpeting and permeable seat covers in the patient compartment of ambulances are more difficult to clean than non-permeable surfaces, their use is not recommended.

***NOTE:** Bleach solution should be made up fresh at the time of use or daily.

Centers for Disease Control, February 1989

INTERVENER AT THE EMERGENCY SCENE

I. General Considerations

A. A duly licensed first responder or ambulance service, having received a bona fide request for emergency medical assistance, is duty bound to respond and deliver reasonable care to the ill or injured, exercising due caution and diligence. Care must be continued until: it is transferred at an appropriate health care facility, the patient is pronounced dead by a licensed physician or has met criteria for death on scene as specified in this document, or the patient has refused care, having been deemed to possess the capacity to do so.

B. Emergency medical care is a continuum begun by prehospital providers that continues through diagnosis, treatment and possibly rehabilitation. The concerted, integrated efforts of the health care team, comprising prehospital providers, physicians, nurses, allied health personnel, clergy and mental health workers, allow for the best possible outcome for the patient. All serve a vital role. Recognizing this offers a guide for dealing with non-prehospital providers who wish to render assistance on the scene of an emergency.

II. Procedure

A. Non-physicians (nurses, midwives, physician assistants, allied health personnel, clergy, mental health workers, etc.) on the scene:

1. Control of an emergency scene should be the responsibility of the individual in attendance who is most appropriately trained and knowledgeable in providing prehospital emergency stabilization and transport.
2. Confrontation should be avoided whenever possible. The appropriate involvement of non-prehospital providers should be determined by the certified responding prehospital providers.
3. *On-line medical direction should be sought for situations where a cooperative working relationship is failing or has failed, or the non-prehospital provider refuses to relinquish care of the patient.*
4. *In any circumstance where the prehospital provider is uncertain whether care proposed by an intervener is appropriate, seek on-line medical direction.*

B. Physician intervention on the scene:

1. Control of an emergency scene should be the responsibility of the individual in attendance who is most appropriately trained and knowledgeable in providing prehospital emergency stabilization and transport.
2. Confrontation should be avoided whenever possible. The appropriate involvement of non-prehospital providers should be determined by the certified responding prehospital providers.
3. When EMS personnel encounter a person claiming to be a physician at the scene, the EMS provider should take reasonable steps to verify the identity of the physician without restricting the physician's access to provide potentially lifesaving care.
    a. If the patient's private physician is present and assumes responsibility for the patient's care: the prehospital provider should generally defer to the orders of the private physician within the limits of the provider's training and certification. Medical direction should be contacted. The private physician should be expected to accompany the patient to the hospital if interventions beyond the scope and practice of the providers have occurred. The prehospital provider reverts back to following these protocols and on-line medical direction at any time when the patient's private physician is no longer in attendance.
    b. If a physician is present who is not the patient's physician and on-line medical direction cannot be established: the prehospital provider should generally relinquish responsibility for the patient's care when the physician has identified himself and has indicated a willingness to assume responsibility and document any interventions. When these conditions exist,

the prehospital provider should defer to the wishes of the physician on the scene within the limits of the provider's training and certification.
If the care and treatment differ from these protocols, the physician should agree in advance to accompany the patient to the hospital. However, in the event of a mass casualty incident or disaster, patient care needs may require the physician to remain at the scene.

c. If a physician is present who is not the patient's physician and on-line medical direction can be established: the on-line physician is ultimately responsible. Should any disagreement between the physician on the scene and the on-line physician exist, the prehospital provider should follow the orders from the on-line physician and place the intervener physician in contact with the on-line physician. The on-line physician has the option of managing the case entirely, working with the physician, or allowing the on-scene physician to assume responsibility.

C. The details of any encounter with an intervener should be documented. Include the intervener's name, qualifications, and any care provided by the intervener.

The following information describes the essential roles of key EMS personnel functioning at a mass casualty incident scene. These descriptions conform to the current plan endorsed by the New England Council for Emergency Medical Services (NECEMS) and are consistent with the Incident Command System. The tasks described are intended to be illustrative of the functions typically associated with the positions but are not necessarily all encompassing for every situation.

Incident Commander

The Incident Commander is typically the senior fire officer on the scene per Vermont law. In the absence of or until arrival of the senior fire officer on the scene, and depending on the nature of the incident, the senior police officer or senior EMS officer may assume the Incident Commander position in accordance with emergency plans. The Incident Commander generally performs the following tasks:

_____ Identifies the type of incident.
_____ Establishes the command post.
_____ Sets the objectives and priorities for all activities.
_____ Has ultimate responsibility at an incident.
_____ Plans and assigns tactical resources.
_____ Delegates authority for Operations, Planning, Logistics, and Finance/Administration Sections to individuals to fill key positions.
_____ Coordinates interagency resources.

EMS Control Officer

The EMS Control Officer directs all medical operations, and is appointed by and reports to the Incident Commander or Operations Officer (if an Operations Officer has been appointed). The EMS Control Officer performs the following tasks:

_____ Identifies the type of incident.
_____ Estimates the number of victims and injuries and communicates with the receiving hospital(s).
_____ Confers with the command post regarding the coordination of traffic and EMS access and the location of any staging areas.
_____ Obtains authority from the Incident Commander or the Operations Officer to enter the scene and establish medical operations.
_____ Appoints and supervises a Primary Triage Officer, Secondary Triage Officer, Treatment Officer, and Loading Officer.
_____ Directs incoming EMS providers to assist in backboarding and other activities as needed.
_____ Confers with the command post regarding the proper location of the treatment area and loading area.
_____ Identifies problems and reassigns resources as needed.
_____ Gives periodic reports to the Incident Commander or the Operations Officer and when appropriate, recommends that the MCI response be terminated, or declared "under control."

Primary Triage Officer

The Primary Triage Officer rapidly and continuously assesses all patients to identify and immediately correct life-threatening problems and is appointed by and reports to the EMS Control Officer. The Primary Triage Officer performs and/or delegates to subordinates the following tasks:

_____ Circulates among all patients and conducts the first level of triage.
_____ Identifies life-threatening problems: airway, bleeding, and shock.
_____ Directs others, when available, to manage airway, bleeding, and shock.
_____ Continues to circulate among patients to assess life-threatening changes (airway, bleeding, and shock) until all patients have been moved to the treatment area.
_____ Continues in this role until relieved by the EMS Control Officer.

Secondary Triage Officer

The Secondary Triage Officer views all patients to determine the order of patient evacuation from the scene to the treatment area and is appointed by and reports to the EMS Control Officer. The Secondary Triage Officer performs and/or delegates to subordinates the following tasks:

_____ Views all patients; identifies and corrects any remaining life-threatening problems (airway, bleeding, and shock).

_____ Conducts the second level of triage by classifying and tagging each patient according to their need for treatment. If using METTAGS, the following number priority codes and colors apply to the corresponding patient condition using the NECEMS secondary triage method:

0 = BLACK	Respiratory/Cardiac Arrest
1 = RED	Rapid transport to hospital
2 = YELLOW	Delayed transport to hospital
3 = GREEN	Transport to hospital not required by ambulance

_____ Continues tagging until all patients have been tagged.

_____ Provides a report to the EMS Control Officer on the number and categories of patients tagged.

_____ Continues in this role until relieved by the EMS Control Officer.

Treatment Officer

The Treatment Officer establishes and supervises all activities in a treatment area, and is appointed by and reports to the EMS Control Officer. The Treatment Officer performs and/or delegates to subordinates the following tasks:

_____ Sets up the treatment area.

_____ Marks boundary lines for the location of red-tagged and yellow-tagged patients.

_____ Supervises all patient care.

_____ Receives and reviews the condition of all patients as they arrive in the treatment area.

_____ Performs the third level of triage, which includes the A/B sorting of red-tagged patients.

_____ Communicates to receiving hospitals the following for each patient: the triage tag number, triage tag color, sex and approximate age, injury or injuries, and estimated time of arrival. (Some or all of these tasks may instead be assigned to the Loading Officer).

_____ Maintains an inventory of supplies and equipment, and requests additional supplies and equipment as needed through the EMS Control Officer.

_____ Coordinates transportation priority decisions with the Loading Officer and refers patients to the Loading Officer.

_____ When permitted by available resources, may appoint and delegate the following tasks to the following subordinates:

Intake Manager (Gatekeeper): Sets up the treatment area, verifies tag color, and performs A/B sorting.

Resource Manager: Places patients in treatment area according to tag color, assigns EMS providers to patients, and monitors resources.

Communications Manager: Communicates with receiving hospitals.

_____ Gives periodic reports to the EMS Control Officer.

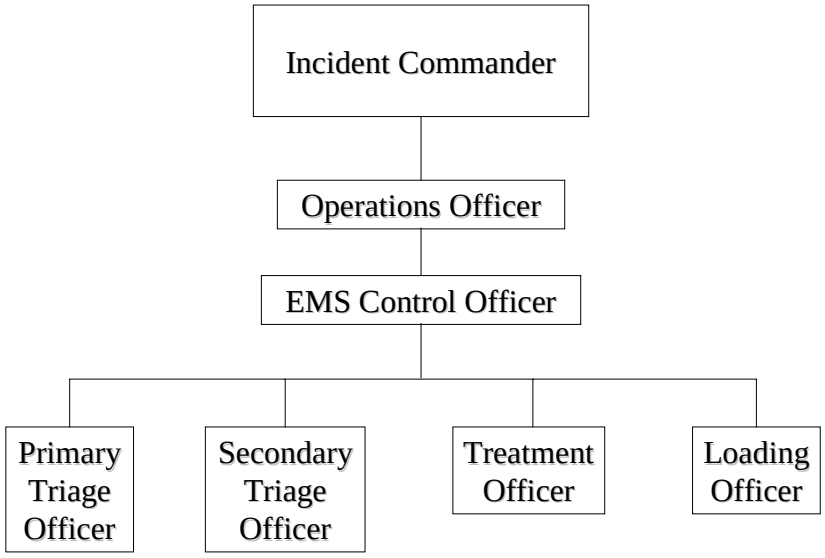
_____ Continues in this role until relieved by the EMS Control Officer.

Loading Officer

The Loading Officer assigns ambulance crews to transport patients and is appointed by and reports to the EMS Control Officer. The Loading Officer performs and/or delegates to subordinates the following tasks:

_____ Establishes the loading area adjacent to the treatment area.
_____ Organizes ambulances for rapid loading of several ambulances at a time.
_____ Performs the fourth level of triage and assigns patients cleared by the treatment officer to ambulances, and the ambulances to the appropriate receiving hospitals.
_____ Maintains a written patient transport log including, for each patient transported: the triage tag color, triage tag number, destination hospital, name of the transporting ambulance service, and time of departure.
_____ Provides all drivers with proper routing instructions and maps as necessary.
_____ Communicates to receiving hospitals the following for each patient: the triage tag number, triage tag color, sex and approximate age, injury or injuries, and estimated time of arrival. (Some or all of these tasks may instead be assigned to the Treatment Officer).
_____ Gives periodic reports to the EMS Control Officer.
_____ Continues in this role until relieved by the EMS Control Officer.

Sample EMS-MCI Organization Chart



SCENE TRANSPORT BY AEROMEDICAL SERVICE

I. General Considerations

A. *Unless otherwise specified by the EMS District Medical Advisor, all requests for the helicopter must be made in conjunction with on-line medical direction*. *The earliest possible contact with medical direction will help assure a timely response.* The helicopter should generally be requested through on-line medical direction after an EMS provider is on the scene to assess the patient(s).

B. Patients should be taken to the closest appropriate medical facility whether by air or by ground. *Decisions about appropriate destination should be made with on-line medical direction.* (See Destination Determination Protocol)

C. For a helicopter scene transport to be worthwhile, the response time of the helicopter to the scene should be significantly less than the time it would take to travel by ground to the nearest medical facility (including extrication time), e.g., 15 minutes for the helicopter to arrive at the scene vs. 25 minutes to provide scene care and ground transport to the nearest facility is an adequate time justification for the use of the helicopter.

D. There should be no delay in patient care while waiting for a helicopter to arrive.

E. An appropriate landing zone should be identified prior to requesting the helicopter.

F. The advanced care that the airmedical crew brings to a scene is a reasonable consideration in the decision to use helicopter transportation and should be discussed with on-line medical direction.

II. History and Physical Exam

The following types of patients should be considered candidates for airmedical transports from pre-hospital scenes:

A. Head injured patients with one or more of the following:
- Glasgow Coma Scale less than 12 or deteriorating mental status to the point where the patient is not verbalizing
- Penetrating injury or open fracture
- Lateralizing findings such as weakness, paralysis, or seizures on one side of the body, or unequal pupils.

B. Chest injury patients with one or more of the following:
- Symptoms of a tension pneumothorax including significant difficulty breathing and or shock.
- A potential cardiac injury as evidenced by symptoms such as jugular vein distension, hypotension, ectopy on a cardiac monitor, or muffled heart tones.
- A penetrating chest wound
- A major chest wall injury (e.g., flail chest or coughing up blood)

C. Patients in need of advanced airway intervention otherwise not available at the scene

D. Burn patients with potential airway involvement

E. Spine injury patients with neurological deficit

F. Patients with clinical signs of shock including mental status deterioration, hypotension, tachypnea, or severe respiratory failure.

G. Patients with amputations proximal to the knee or elbow.

H. Complex medical or trauma patients who may benefit from treatment at a specialty center.

I. Patients in cardiac arrest from any cause **are not** candidates for airmedical transport.

J. *Any patient who does not specifically fit into one of the above categories, but the EMS provider on the scene feels would benefit from airmedical transport, should be discussed with on-line medical direction.*

III. Procedure

A. Obtain an appropriate history and perform a physical examination based on the patient's presenting problem(s).
B. Initiate treatment according to the appropriate protocol(s).
C. Consider airmedical transport for the patients described in **Section II.** If airmedical transport is likely to shorten the patient's time to potentially lifesaving advanced treatements or until arrival at an appropriate medical facility, *contact on-line medical direction to discuss a request for the helicopter.*
D. Request the helicopter, if indicated, according to local dispatch procedures.

TERRORISM

I. General Considerations

A. Terrorist incidents could involve nuclear, chemical, biological or other weapons of mass destruction.

B. EMS providers may be the first responders on the scene of a terrorist incident. Early identification of a possible terrorist event will be helpful to overall management. Any explosion, large scale illness, major incident at a public landmark, or other situation that is not easily explainable by the circumstances should be considered a terrorist incident until confirmed otherwise by law enforcement officials.

C. The safety of your personnel, other emergency responders and protection of the uninvolved public take precedence over the treatment of ill or injured persons.

D. Secondary devices may be placed with the intent of destroying emergency response resources and personnel. Consider parking and staging areas for vehicles and personnel carefully. Avoid staging all resources at a single site.

E. Establish unified command upon the arrival of fire, police and EMS agencies.

F. EMS should provide the earliest possible notification to the primary and other potential receiving hospitals. Report the nature of the scene and an estimated number of patients as the initial update.

G. Transport contaminated patients only after they have been decontaminated according to a process determined by the incident commander.

II. Procedures

EMS First On Scene

A. If an incident is suspected as a terrorist event, treat it similarly to other HAZMAT scenes.

B. Approach the scene safely and cautiously.
   1. Approach from upwind and uphill (if possible)
   2. Observe from a distance

C. Identify if hazards are present.

D. Secure the scene; deny entry to bystanders and untrained personnel.

E. Establish incident command and identify a command post.

F. Request additional assistance as needed.

G. Update hospital(s) of the scene and estimated number of patients. Include the possibility of contaminated patients arriving by non-EMS means.

H. Do not enter any areas or zones unless you are properly trained and equipped to do so.

I. Transfer incident command to the senior fire or police official for the jurisdiction when they arrive.

J. Identify the type of personal protective equipment necessary for EMS operations at this scene.

EMS Not First On Scene

A. Report to the command post or staging area as directed.

B. Obtain additional assistance as required.